LAW OFFICES
ARTHUR B. CUNNINGHAM
79 Checkerberry Lane, Hopkinton, NH 03229

May 12, 2016

Regional Freedom of Information Officer
US EPA, Region 1 (OARM01-6)
Suite 100
5 Post Office Square
Boston, MA 02109-3912

Re: Freedom of Information Act Request (5 USC Section 552) Peirce Island WWTF

Dear Sir:

I represent a group that has substantial concern about the proposed Portsmouth, New Hampshire, Peirce Island WWTF project. My client group has substantial doubt that the proposed project will end ongoing violations of the Clean Water Act (CWA) at the Peirce Island facility.

The project is subject to the pending Consent Decree Second Modification in the United States District Court, District of New Hampshire No. 09-cv-283-PB. The EPA has approved the Second Modification. My client group expects to legally challenge the Second Modification pursuant to applicable provisions of the CWA. The basis of the challenge may include, but not be limited to, the lack of diligent prosecution of violations of the CWA, violations expected to continue under the terms and conditions set forth in the Second Modification. See Gwaltney of Smithfield v. Chesapeake Bay Foundation, 484 US 49 (1987).

Please, pursuant to 5 USC 552, provide the following documents:

1. Each and every NPDES permit issued for the Pierce Island WWTF, together with all applications submitted by the City of Portsmouth for the permits.

2. Each and every CWA 301(h) waiver granted to the Pierce Island WWTF, together with all applications submitted by the City of Portsmouth for CWA 301(h) waivers. Please also provide the EPA approvals or denials of the waiver requests.

3. The history of CWA violations at the Peirce Island WWTF, both permit and 301(h) waiver. Please also provide documentation of EPA action regarding the violations.

4. Each and every document, in paper or digital form, presented to EPA by the City of Portsmouth, its consultants and contractors, seeking EPA approval of the final plans and specifications for the Peirce Island WWTF upgrade, the subject of the Consent Decree Second Modification. Please also provide each and every EPA communication, paper or digital, to the City of Portsmouth, its consultants and contractors regarding the final plans and specifications. Please also provide each and every review and analysis done by EPA of the final project plans and specifications whether or not provided to the City of Portsmouth is consultants and contractors.

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5. On January 30, 2013, Denny Dart, Manager, Water Technical Unit, EPA wrote to Peter Rice, PE, Deputy Director of Public Works regarding NPDES Permit No. NH0100234, Consent Decree Docket No. 09-cv-283 PB, *Wastewater Master Plan Phase 2 Initial Piloting Technical Memorandum*, 2 Volumes, prepared by AECOM, dated September 27, 2012. The letter questioned the size of the secondary treatment system proposed in the Phase 2 Study. (A copy of the letter is attached hereto). The letter also addressed a July 31, 2012, letter from EPA that advised that the draft permit would contain a total nitrogen monthly average limit of 8 mg/l and that future permits may include a total nitrogen monthly average limit of 3 mg/l.

a. Please provide each and every document, treatise, guideline, study, report, data and other information used by EPA to question the adequacy of the City recommendation to size the WWTF secondary treatment system to treat an annual average flow of 6.13 gallons per day (MGD), a maximum monthly flow of 8.85MGD and a maximum daily flow of 9.06MGD. The documents should include but not limited to each and every document in both paper and digital format received from or sent by EPA to the City of Portsmouth consultants, contractors and advisors, including, forecasts, studies, analyses, data collections and summaries, models, correspondence, email and voicemail regarding the Peirce Island: (1) waste water sources and flowrates; (2) impact of the collection system on flowrates; (3) analysis of the flowrate; (4) analysis of the waste water constituents; (5) analysis of the constituent concentrations and mass loading rate data; and (6) flow equalization. The information provided should include all analyses of the projected peak flow rates and accompanying mass loadings as accounted for in the selection of the Peirce Island project design. The information provided should include all flow monitoring data of the combined wastewater storm water system as accounted for in the Peirce Island project design. The information provided should include all analyses of facilities and diversion structures accounted for in the Peirce Island project design including regulators, catchments, storage tanks and basins and CSO outfalls for which the City seeks a permit.

b. Please provide each and every document received from the City of Portsmouth its consultants and contractors responsive to the questions and comments presented in the January 30, 2013, letter. Please also include each and every EPA document responsive to the communications and documents received from the City of Portsmouth, its consultants and contractors, including all analysis done by EPA regarding the City of Portsmouth responses.

6. On May 30, 2013, Susan Studlien, Director, Office of Environmental Stewardship, EPA, wrote to Peter Rice, Deputy Director of Public Works, expressing concern that the proposed Peirce Island project will not be sized correctly to provide sufficient treatment to all flows expected during wet weather. (A copy of the letter is attached hereto).

a. Please provide each and every document received from the City of Portsmouth its consultants and contractors responsive to the May 30, 2013, letter. Please also include each and every EPA document responsive to the communications and documents received from the City of Portsmouth, its consultants and contractors, including all analysis done by EPA regarding the City of Portsmouth responses.

b. The May 30, 2013, letter also addressed the matter of nitrogen removal. Please provide each and every document received from the City of Portsmouth its consultants and contractors responsive to the May 30, 2013, letter regarding nitrogen limits. Please also include each and every EPA document responsive to the communications and documents received from the City of Portsmouth, its consultants and contractors, including all analysis done by EPA regarding the City of Portsmouth responses regarding the nitrogen limit.

6. Each and every document and analyses performed, in paper or digital form, relied upon by EPA to approve the Second Modification, notwithstanding the concerns raised by the EPA about the appropriateness of the size of the project expressed in the letters of January 30, 2013, and May 30, 2013.

Very truly yours,

Arthur B. Cunningham

Cc: Clients

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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5 Post Office Square, Suite 100
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JAN [illegible] 2013

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Peter Rice, P. E.
Deputy Director of Public Works
City of Portsmouth
680 Peverly Hill Road
Portsmouth, NH 03801

Re: City of Portsmouth, New Hampshire
NPDES Permit No. NH0100234
Consent Decree Docket No. 09-cv-283-PB
Wastewater Master Plan Phase 2 Initial Piloting Technical Memorandum, 2 Volumes, prepared by AECOM, dated September 27, 2012

Dear Mr. Rice:

Thank you for presenting an overview of the *Wastewater Master Plan Phase 2 Initial Piloting Technical Memorandum* ("Phase 2 Study") and for providing an opportunity to ask questions at the technical meeting held in Portsmouth on December 18, 2012. Following the technical meeting with the City and its consultants, EPA and the New Hampshire Department of Environmental Services ("NHDES") reviewed the study again and the Agencies' questions and comments are given below.

General Comments:

EPA and NHDES continue to question whether the size of the secondary treatment system as proposed in Portsmouth's Phase 2 Study is adequate to treat all dry-weather and an appropriate portion of wet-weather flows (i.e., infiltration and inflow ("I/I")) in accordance with widely-accepted wastewater treatment facility ("WWTF") design standards (e.g. TR-16 Guides for the Design of Wastewater Treatment Works). Specifically, Portsmouth recommends sizing the Peirce Island secondary treatment system to treat an annual average flow of 6.13 million gallons per day ("MGD"), a maximum monthly flow of 8.86 MGD, and a maximum daily flow of 9.06 MGD. Hence, the secondary WWTF would be sized to treat the largest recorded dry-weather daily flow including 20-year growth projections plus a limited amount of I/I. Flows exceeding the design would bypass secondary treatment and receive chemically-enhanced primary

treatment ("CEPT") and disinfection prior to discharge to the Piscataqua River. Portsmouth's plot of the *January 2008 through June 2012 Flow and Precipitation Data (at Max Day Flow of 9.06 MGD)* shows that flows would bypass secondary treatment for one to two consecutive weeks during spring and fall seasons, and would often bypass secondary treatment for several days after the end of a storm.

Specific Comments and Questions:

Please respond to the Agencies' questions and comments listed below **within 30 days of receipt of this letter.**

1. Attachment C of Phase 2 Study *Revised Wastewater Flow and Loading Study*, prepared by AECOM, August 27, 2012

   Despite the fact that Portsmouth owns and operates a combined sewer system ("CSS"), the Phase 2 Study indicates that the design concept is to *size Portsmouth's Peirce Island secondary treatment system upgrade to treat flows up to the largest dry weather daily flow recorded* from January 1, 2008 through June 30, 2012, 7.73 million gallons per day ("MGD"), *plus additional flows to accommodate 20-year projected growth.* The Phase 2 Study recommends that the secondary treatment system average annual, secondary treatment maximum month, and secondary treatment maximum day design flow rates should be 6.13 MGD, 8.86 MGD, and 9.06 MGD, respectively. AECOM advises that secondary treatment bypasses would occur during wet-weather when the capacity of the secondary treatment system was exceeded, and that the bypass flows would receive CEPT and disinfection before blending with secondary treatment system effluent ("blended effluent") and discharge.

   a. During wet weather, the blended effluent must fully comply with all of the effluent limitations contained in the City's 2007 NPDES permit as well as a monthly average total nitrogen limit of 8 mg/l. The Phase 2 Study should provide discussion and supporting mass balance calculations demonstrating whether partitioned CEPT and secondary treatment flows and removal efficiencies will consistently result in discharges that are in full compliance with NPDES effluent limitations.

   b. DES' initial Data Set review suggests that secondary treatment bypasses would have occurred on 238 days (14.5%) of the 1,643 days of record, with durations lasting as long as 19 consecutive days. Please review the Peirce Island WWTF flow and precipitation data from January 1, 2008 through June 30, 2012 ("Data Set") and provide the number of days of secondary bypass that would have occurred, the greatest number of *consecutive* days of secondary

bypass that would have occurred, and volumes associated with secondary treatment bypasses of flows greater than 9.06 MGD.

c. Please review the 4.5 year Data Set and compare the precipitation record to the long-term precipitation record for Portsmouth, and to a typical year precipitation pattern.

d. Please provide projections of the effects of the sewer separation program on reducing the annual average flow to the Peirce Island WWTF.

2. As part of the Phase 2 Study, AECOM reviewed the 4.5 year Data Set and assessed the Peirce Island WWTF's response to wet weather events and to snowmelt conditions. AECOM then "parsed" the Data Set into dry and wet weather flow days (see Table 2 of Attachment C). AECOM defined wet-weather flow days based on the size of the precipitation event, and included any day with snowpack and temperatures above 32 degrees Fahrenheit. AECOM noted that WWTF influent flows may be elevated for up to 12 days following a rain event.

EPA's 1994 Combined Sewer Overflow ("CSO") Policy defines a CSO as the discharge from a CSS at a point prior to the publicly owned treatment works ("POTW") treatment plant, and among other things, requires municipalities that own and operate a CSS to implement the technology-based nine minimum controls ("NMCs") and develop and implement a long-term CSO control plan to achieve NPDES Permit and CWA compliance. One of the NMCs is the "maximization of flow to the POTW for treatment."

The CSO Policy does not alter regulatory requirements for permits. Pursuant to 40 C.F.R. Part 122.41(m)(4), bypass, including CSO-related bypass, is prohibited and is subject to enforcement unless there are *no feasible alternatives to the bypass*, the record shows that the secondary treatment system was properly operated and maintained, *that the system has been designed to meet secondary limits for flow greater than the peak dry weather flow plus an appropriate quantity of wet weather flow, and that it is either technically or financially infeasible to provide secondary treatment for greater amounts of wet weather flow.*

Based on the information presented in the Phase 2 Study, the Agencies continue to be concerned that the Peirce Island secondary treatment system upgrade is not being adequately sized to treat peak dry weather flows plus an appropriate quantity of wet weather flow, and that the peaking factor is not consistent with TR16 guidance for an appropriate ratio of maximum design flow to average flow.

a. In parsing the City's 4.5 year Data Set, AECOM included all days with measured precipitation of .05 inches or greater in its "wet weather" classification. The Agencies assert that rainfall days included in the *lowest* wet tier of the Data Set (the .05-.40 inch class) hardly constitute significant wet weather events, as they appear to result in no apparent (or only slight) flow increases to the WWTF; hence, those days should not be included in the parsed wet weather data set.

A minimum rainfall event of 0.4 inches appears to represent a more appropriate wet weather *floor* value for this evaluation. EPA and DES request that the City and AECOM re-parse the 4.5 year Data Set to delete the .05-.40 inch precipitation class, and then re-compute the Peirce Island WWTF dry weather average daily flow ("ADF"). This recalculation may affect a different dry weather ADF value, and also illustrate the ADF calculation's sensitivity to wet weather classification assumptions.

b. What is the largest secondary treatment system that could be constructed on Peirce Island, and how many secondary bypass events would occur annually if the City built such a plant?

c. Page 1-2. Please clarify for the Agencies, what other options the City is considering regarding the upgrade of the WWTF which may further modify the findings of the Phase 2 Study.

3. Please make the following edits and revisions to Volume 2, Chapter 4 (Summary) of the Phase 2 Study:

a. On Page 362, revise Line 15 to state that field COD measurements were greater than 275 mg/l, not % as cited.

b. On Page 363, the Section 5 discussion references a boxplot for lab and field TSS from each process. This boxplot should be identified as Figure 4.1-01, not 4.1-02 as cited.

c. On Page 364, the boxplot of Effluent TSS Lab Results should read Figure 4.1-01, not 4.1.02 as cited, and the spelling of boxplot should be corrected. In addition, this figure appears a second time on the following page.

d. On Page 365, the Section 6 discussion states "The results [for effluent BOD comparison] are provided below." No such BOD boxplot is provided, and should be inserted as Figure 4.1-02.

e. On Page 366, the discussion entitled "Comparison of Effluent TN" should read Section 7, not 6 as cited. Subsequent sections are similarly mis-numbered.

4. During the December 2012 meeting, Portsmouth explained that: I/I removal would continue with sewer separation projects construction as required by the Consent Decree ("CD") to further reduce flows; the City was initiating a private I/I removal program to focus on replacing leaky, private service laterals and removing sump pumps and roof drains from the City's sewers and redirecting storm flows to storm drains; and there is significant inflow into portions of the City's separate sewer system that must also be addressed in the future to reduce the WWTF influent flows. Please provide more detail to the Agencies regarding these three I/I removal programs and the projected WWTF influent flow reduction.

5. Portsmouth's October 30, 2012 quarterly progress report on projects required by the CD

a. Portsmouth linked achieving the negotiated compliance schedule deadlines for secondary plant upgrade design, construction and achieving full NPDES Permit compliance to final reissuance of the new NPDES Permit. EPA's July 31, 2012 letter to the City advised that the draft permit would contain a total nitrogen monthly average limit of 8 mg/l and that future permits may include a total nitrogen monthly average limit of 3 mg/l. Portsmouth has a continuing obligation to comply with its current permit and has sufficient information about likely future limits to design and construct necessary secondary treatment facilities without delay.

b. Portsmouth reported that it was continuing to investigate why the CEPT facility was violating the interim effluent limits for biochemical oxygen demand ("BOD") contained in Appendix C of the CD. Portsmouth has also noted that due to its on-going sewer separation efforts the strength of the soluble fraction of BOD in the CEPT influent has increased and that the secondary treatment upgrade will remove soluble BOD. Each violation of the interim effluent limit is significant non-compliance and must be addressed expeditiously with updates included in the quarterly CD progress reports.

c. Portsmouth advised that its 2010 Post Construction Monitoring Plan ("PCMP") implementation schedule would be updated to reflect the negotiated CSO sewer separation projects schedule of the CD modification. The CD requires Portsmouth's PCMP to assess progress made towards meeting the goal of the 2010 LTCP update and the Clean Water Act and 1994 CSO Policy and federal and

state regulations and permits, and where problems are identified, the City must submit a supplement Corrective Action Plan within 60 days, submitting two progress reports per year from July 1, 2014 onward including data collected. Please clarify this in PCMP updates.

If you have any questions or comments, please feel free to call Joy Hilton at (617) 918-1877 or have your attorney contact Michael Wagner at (617) 918-1735.

Sincerely,

Denny Dart, Manager
Water Technical Unit

cc: Tracy Wood, NHDES
Steve Roberts, NHDES
Stergios Spanos, NHDES
Brian Pitt, EPA-OEP
Michael Cobb, EPA-OEP
Terry Desmarais, City Engineer, Portsmouth, NH
Tom Irwin, CLF

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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

MAY 3 0 2013

Peter Rice, P.E.
Deputy Director of Public Works
City of Portsmouth
680 Peverly Hill Road
Portsmouth, NH 03801

Re: Consent Decree Docket No. 09-cv-283-PB
NPDES Permit No. NH0100234

Dear Mr. Rice:

In the City of Portsmouth's April 30, 2013 quarterly status report submitted pursuant to the Consent Decree, the City states that it believes an extension of the schedule in the Decree to meet effluent limitations based on secondary treatment may be warranted. More specifically, the City seeks an 18-month extension of the May 1, 2017 compliance date included in the Consent Decree on the grounds that it would be more efficient to upgrade treatment facilities to meet not only secondary treatment standards, but also nitrogen limits that may be contained in a future NPDES permit. As is detailed below, EPA does not believe an extension of the Consent Decree schedule is warranted.

The City's quarterly status report contends that the "City has received communications from EPA which appear to seek commitments from the City greater than, and inconsistent with, the City's obligations under the Consent Decree." The City states that a January 30, 2013 letter from EPA suggests that "the new plant must be built to include nitrogen treatment to 8 mg/L total nitrogen (TN) monthly average for both dry weather and wet weather effluent."

EPA's January 30, 2013 letter makes clear that the schedule for compliance with the Consent Decree should not be linked to achieving nitrogen removal. EPA provided its prediction on nitrogen limits not to mandate nitrogen controls, but rather to provide the City with the opportunity to ensure that any facilities built would be consistent with the control of nitrogen. EPA reiterated this position in a March 6, 2013 letter emphasizing that the Consent Decree requires compliance with secondary treatment requirements, not future unknown limits. Nothing has changed. EPA and the State requested, and the City agreed to, a schedule in a consent decree that requires achievement of limits based on

secondary treatment. There is no permit limit or enforcement mechanism in place requiring the City to construct nitrogen control.

EPA's January 30, 3013 letter was not the first time that the possibility of future nitrogen limits has been discussed. As is the agency's typical practice, we advise a permitee of the possibility of future permit limits where possible so that the permitee has the opportunity to take future limits into account during the evaluation of treatment options. In this case, nitrogen control was among the issues discussed in a meeting on October 26, 2006, involving the City, the State and EPA. On May 23, 2007, the City provided EPA with a work plan for developing and implementing the City's wastewater master plan that included review of "possible future, more stringent effluent limitations (i.e. total Nitrogen)." The issue was again discussed at meetings between the City, State, Conservation Law Foundation and EPA on August 28, 2007, October 5, 2007 and October 9, 2007. Given this history and the City of Portsmouth's active participation and funding of efforts to thoroughly review the basis of governmental decision-making with regard to nitrogen in Great Bay, it would be puzzling to discover that the City never seriously considered developing schedules for constructing nitrogen control facilities until now. This is particularly true since at a recent public meeting, Portsmouth Department of Public Works staff discussed in detail the financial implications of constructing nitrogen controls.

EPA's objection to extending the current Consent Decree schedule is also based on the path taken to arrive at that schedule, including the City's active involvement in crafting the schedule and the number of extensions that have already been afforded to the City. On April 10, 2007, EPA re-issued a NPDES permit to the City that, for the first time, contained limits based on secondary treatment. The City could have immediately commenced with the design process and likely have already completed construction or be nearing completion of construction. However, the City sought a three-year period in which to explore alternatives for plant design and location. EPA and the State accepted the City's proposal. The City then proposed a schedule that included construction of secondary treatment facilities extending into the year 2032. While EPA objected to that schedule, the City sought and received an additional year to perform pilot testing. In concert with the State, EPA accepted a City-proposed schedule that included a milestone for meeting secondary treatment limits by December 2016. As the parties were approaching agreement on the language of a Consent Decree modification to include the December 2016 date, the City notified EPA and the state that it would be unable to meet its own schedule. The City proposed a new compliance milestone of May 2017, and once again EPA and the State agreed to that later date.

The City has provided no information demonstrating that the City is incapable of meeting secondary treatment limits by the May 2017 milestone. Too many years have passed since the 2007 NPDES permit was issued to extend the schedule again simply because the City did not plan for addressing nitrogen controls until recently. As noted above, for over six years, EPA has encouraged the City to consider denitrifiation as part of any upgrade to meet secondary treatment limits.

Finally, please note that we believe the City is proposing a plant that will not be sized adequately to provide sufficient treatment to all of the flows expected during wet weather. EPA is accepting the City's proposal for now but reminds the City that if further progress on reducing inflow does not occur at a satisfactory rate, EPA or the State could seek additional judicial remedies to address overflows and bypasses.

Thank you for your attention to these matters. If you have questions, please call Joy Hilton of my staff at 617-918-1877.

Sincerely,

Susan Studlien

Susan Studlien, Director
Office of Environmental Stewardship

cc: John Bohenko, City Manager, City of Portsmouth
David Allen, P.E., Assistant City Manager
Robert Sullivan, City Attorney
Suzanne Woodland, Assistant City Attorney
E. Tupper Kinder, Esq., Nelson Kinder & Mosseau PC
Allen Brooks, Esq., Department of Justice, Environmental Protection Bureau
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Tracy Wood, P.E., NHDES